RESULTS

Employing the criteria previously outlined, erythropoietic depression was demonstrated in eight of 16 patients (50%) with hepatic insufficiency and six of 19 patients (32%) with renal insufficiency (Table 1). No erythropoietic depression or toxicity was demonstrable in 16 patients without hepatic or renal insufficiency. In the patients with liver disease erythropoietic depression occurred in seven of nine patients (78%) with either ascites or jaundice and in all four patients with both ascites and jaundice (Table 2).

TABLE 1.—INCIDENCE OF ERYTHROPOIETIC DEPRESSION

Condition	Number	Number toxic	Percent toxic
No liver or renal disease	16	0	0
Renal disease	19	6	32
Liver disease	16	8	50

TABLE 2.—ERYTHROPOIETIC DEPRESSION IN LIVER DISEASE

Signs	Number	Number toxic
Ascites	2	1
Jaundice	3	2
Ascites and jaundice	4	4
No ascites or jaundice	7	1
Total	16	8

The duration of treatment of the patients showing toxic effects varied from 10 days to 28 days. In the majority of the patients chloramphenicol was discontinued after the second week of therapy with a mean time of 18 days for all patients showing toxic effects. Only one patient in this group received chloraphenicol for the full 28 days.

The changes in serum iron and per cent saturation of IBG are summarized in Table 3. The initial value represents the average of two determinations obtained on separate days. In both toxic groups there was a significant rise in serum iron accompanied by a marked increase in per cent saturation of IBG. This increase in per cent saturation of IBG in the toxic groups represented an absolute change of 64% over initial values. In the nontoxic groups with liver or renal disease slight increases in serum iron and per cent saturation of IBG were observed, but the mean changes in per cent saturation of IBG were less than 15% over initial values. Ferrokinetic studies with Fe^{59} demonstrated a prolonged plasma clearance time (T/2) and a delay in the appearance of the Fe^{59} in RBC in both toxic groups (Fig 1 and 2). After six days maximum amounts of radioactivity

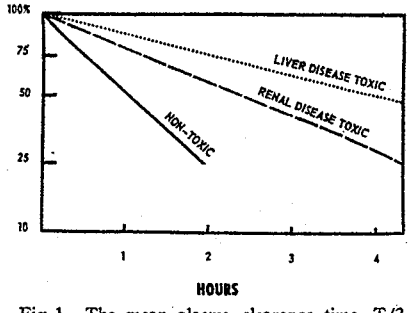

Fig 1.—The mean plasma clearance time, T/2. T/2 for nontoxic patients was 65 minutes; for renal disease with toxicity, 140 minutes, and for liver disease with toxicity over 240 minutes.

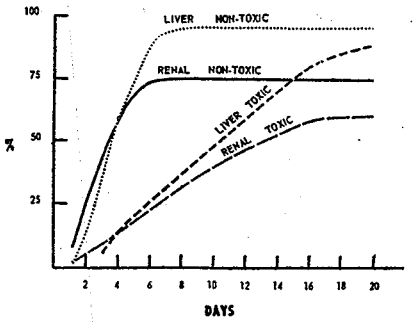

Fig 2.—The mean appearance time of radioiron in circulating RBC. Both the liver and renal nontoxic groups have normal appearance times with maximal amounts of Fe^{59} present after six-seven days. The delayed appearance of radioiron in the toxic groups is shown with maximal amounts of Fe^{59} not reached for 16-18 days.